

§ 272.3 Definition of basic research.

Basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress.

§ 272.4 Policy.

It is DoD policy that:

(a) Basic research is essential to the Department of Defense's ability to carry out its missions because it is:

(1) A source of new knowledge and understanding that supports DoD acquisition and leads to superior technological capabilities for the military; and

(2) An integral part of the education and training of scientists and engineers critical to meeting future needs of the Nation's defense workforce.

(b) The Department of Defense shall:

(1) Conduct a vigorous program of high quality basic research in the DoD Component laboratories; and

(2) Support high quality basic research done by institutions of higher education, other nonprofit research institutions, laboratories of other Federal agencies, and industrial research laboratories.

(c) The DoD Components' conduct and support of basic research shall be consistent with the principles stated in Appendix A to this part.

§ 272.5 Responsibilities.

(a) The Director of Defense Research and Engineering, under the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)), shall:

(1) Provide technical leadership and oversight, issue guidance for plans and programs; develop policies; conduct analyses and studies; and make recommendations for DoD basic research.

(2) Recommend approval, modification, or disapproval of the DoD Components'

basic research programs and projects to eliminate unpromising or unnecessarily duplicative programs, and to stimulate the initiation or support of promising ones.

(3) Recommend, through the USD(AT&L) to the Secretary of Defense, appropriate funding levels for DoD basic research.

(4) Develop and maintain a metrics program to measure and assess the quality and progress for DoD basic research, a required element of which is an independent technical review:

(i) At least biennially; and

(ii) With participation by all the Military Departments and all the other DoD Components that have basic research programs.

(5) Monitor the implementation of this part and issue any additional direction and guidance that may be necessary for that purpose.

(b) The Directors of the Defense Agencies supporting basic research and the Secretaries of the Military Departments, within their organizational purview, shall implement this part.

APPENDIX A TO PART 272—PRINCIPLES FOR THE CONDUCT AND SUPPORT OF BASIC RESEARCH

1. Basic research is an investment. The DoD Components are to view and manage basic research investments as a portfolio, with assessments of program success based on aggregate returns. There should be no expectation that every individual research effort will succeed because basic research essentially is an exploration of the unknown and specific outcomes are not predictable.

2. Basic research is a long-term activity that requires continuity and stability of support. Individual basic research efforts sometimes return immediate dividends, with transitions directly from research laboratories to defense systems in the field. However, most often the full benefits of basic research are not apparent until much later. Therefore, the DoD Components must engage in long-term planning and funding of basic research to the maximum possible extent.

3. Balance is essential in the portfolio of basic research investments. A wide range of scientific and engineering fields is of potential interest to the Department of Defense and the DoD Components. It is important to develop a balanced portfolio that includes investments not only in established research areas with promise for evolutionary advances, but also in areas that entail higher